

ABSTRACT OF THE DISCLOSURE

A thermally wavelength tunable laser includes a core, the core including more than one diffraction grating, and
5 thermo-optical material adjacent to each diffraction grating. By selectively changing the temperature and hence the refractive index in the thermo-optical material adjacent to a chosen diffraction grating, the chosen diffraction grating can be tuned over a selected wavelength range. By
10 selecting different diffraction gratings, different, non-overlapping wavelength ranges can be selected and the laser can be tuned over a broad range of wavelengths.